

## SOFT TRANSITION CONVERTER

09 | 260478

### **Abstract of the Disclosure**

6 The present invention is a circuit and method for reducing switching and reverse recovery losses in the  
7 output rectifiers while creating zero voltage switching conditions for the primary switchers. There are  
8 described two output configurations, one employing a soft commutation inductor element a bridge rectifier  
9 and a output filter capacitor, the second using a soft commutation inductor element a rectification-filtering  
10 bridge composed by <sup>two</sup>~~two~~ capacitors and two capacitors. Both secondary circuits can be driven by three  
11 primary circuits. A first circuit is a full bridge with phase shift control, and a second circuit is a half bridge  
12 topology with an additional bidirectional switch which achieves two goals, on to get soft switching  
13 commutation across all the primary switches, the second to create the right waveforms in the secondary  
14 suitable with the claims in this invention. The third topology is a phase shifted two transistors forward. The  
15 circuits claimed in this invention can provide soft commutation across the primary switching elements and  
16 secondary rectifier means, clamping the voltage across the rectifiers to the output voltage eliminating the  
17 need for snubbers circuits both in primary and the secondary section.